ART. III.—Australian Mosses, enumerated by William Mitten, Esq.

[Contributed 20th April, 1882.]

Less than two years ago the great bryologist, Dr. Edward Hampe, then at the venerable age of eighty-five years, responded most kindly to a wish of mine, to place together systematically the names of all mosses of continental Australia, which had become known to him either from large material out of my own collections for nearly thirty years, or from any other bryologic sources accessible to him. Death soon subsequently closed the researches of this Nestor in botanic science, and the list above referred to was therefore his last contribution to that branch of knowledge. which he had leadingly advanced since more than half a century. Dr. Hampe's record having been published in the eleventh volume of the Fragmenta Phytographice Australia, along with enumerations of different Australian evascular Acotyledoneæ by other masterly specialists, I was eager to supplement the bryologic index also with those Tasmanian species, which are not known to occur in continental Australia, and also with any other mosses, which would be additional to those of Dr. Hampe's record. A request made for this purpose to the foremost of bryologists in Britain, William Mitten, Esq., who already twenty years ago had aided much in the elaboration of the mosses for Sir Joseph Hooker's Flora Tasmania, met with a most ready response. Accordingly, he has now enumerated all the Australian species known to him, either from literary works or from collections accessible in Britain. Meanwhile, to close the eleventh volume of the Fragmenta in 1881, a supplement to Hampe's list, compiled by myself, had passed through the press; and it devolves therefore on me to see otherwise early publication given to Mr. Mitten's fuller writings, particularly as the manuscripts were placed by him unreservedly at my disposal. I beg therefore, to submit these pages to the Royal Society of Victoria, the mosses of our own colony being dealt with in these writings also, and some additional notes of localities given by myself. I may

still add, that Mr. Mitten has evolved a special and very excellent system of bryology from his most extensive study of mosses, obtained from all parts of the globe, which systematic arrangement of his own he has applied already to a most ample descriptive elaboration of the moss-flora of South America.

FERD. VON MUELLER.

I. DICRANEÆ.

Bruchia, Schwaegrichen.—(Sporledera, Hampe).

B. exigua, Hook. & Wils. in Hook. icon. pl. rar. 737 A. (Phascum); C. Muell. in Bot. Zeit., 1847 (Bruchia); Krauseana, Hampe, C. Muell., Syn. I. 16.

Swan River, Drummond; St. Vincent Gulf, Dr. Behr.

B. minuta, Mitt. in J. Hook., Fl. Tasm. II., 165, t. 171. Tasmania, Archer.

Pleuridium, Bridel.

P. gracilentum, Mitt. in J. Hook. Fl. Tasm. II., 164. King George's Sound, Menzies; Tasmania, Archer.

P. curvulum, Tayl.; P. nervosum, Mitt. in Kew Journ. Bot. VIII., 257 (Phascum); pulchellum, Hook. and Wils. (Eccremidium).

Swan River, Drummond; Gippsland, F. v. Mueller.

P. tenuissimum, Tayl. in Lond. Journ. of Bot., 1846 (Bryum); arcuatum, Hook. and Wils. in Hook. icon. pl. rar. 738 A. (Eccremidium).

Swan River, Drummond.

P. tenellum, Mitt. in J. Hook. Fl. Tasm. II., 164. Tasmania, Archer.

Ditrichium, Timm.—(Leptotrichum, Hampe).

D. Muelleri, Hampe in Linnæa, 1855, 206. Grampians, F. v. M.

D. scabrifolium, Mitt.

Tasmania, Archer.

D. Oldfieldi, Mitt. in J. Hook. Fl. Tasm. II., 177 (Leptotrichum).

Tasmania, Oldfield.

D. laxifolium, J. Hook. & Wils. in Fl. Tasm. II., 177; D. flexifolium, Mitt. in Kew Journ. Bot. VIII., 257.

Victoria, F. v. M.; Tasmania, J. Hooker, Oldfield.

D. australe, Mitt. in J. Hook. Fl. Tasm. II., 177. Tasmania, Archer.

D. affine, C. Muell. Victoria, F. v. M.

D. cylindrocarpum, C. Muell. in Bot. Zeit., 1851, 351.

Tasmania, Mossman.

D. elongatum, J. Hook. & Wils. in Fl. Tasm. II., 176. Tasmania, Fraser, J. Hooker, Archer.

Dicranella, C. Mueller.

D. rufo-aurea, Hampe in Linnæa, 1859, 60 (Angstræmia). Australian Alps, F. v. M.

D. Dietrichiæ, C. Muell. in Linnæa XXXV., 617.

Queensland, A. Dietrich.

D. trichodontoidea, C. Muell. in Revue Bryol., 1876, 3. Near Sydney, Kayser.

D. tricruris, C. Muell. (Angstræmia, Diobelon) in Linnæa XXXV., 616.

Anisothecium, Mitten.

A. ferrugineum, Mitt. in J. Hook. Fl. Tasm. II., 171 (Leptotrichum); brachycarpum, Hampe in Linnæa, 1872. Blue Mountains, Rev. Dr. Woolls; Tasmania, Archer.

Trematodon, Cl. Richard.

T. longescens, C. Mueller in Rev. Bryol., 1876, 3. Near Sydney, Kayser.

T. flexipes, Mitt. in J. Hook. Fl. Tasm. II., 173, t. 172. Tasmania, Archer.

Rhabdoweisia, Bruch & Schimper.

R. cyathocarpa, Mont. (Zygodon). Tasmania, Archer, Oldfield.

Leptodontium, Hampe.

L. papillatum, J. Hook. & Wils. in Fl. N. Zeal., t. 85; Leskea rubicaulis, Tayl.; Zygodon Preissianus, Hampe in Linnæa, 1860, 633.

West. Austr., Preiss; Victoria, Adamson; Tasmania,

J. Hooker, Archer, Oldfield.

Blindia, Bruch & Schimper.

B. robusta, Hampe in Linnæa, 1860, 627; F. v. M., Austr. Mosses, pl. VII.

Australian Alps, F. v. M.

B. arcuata, Mitten.

Tasmania, Archer.

Holomitrium, Bridel.

H. Dietrichiæ, C. Muell. in Linnæa, 1871, 147.

Brisbane River, Dietrich; Severn River, Hartmann.

H. Muelleri, Hampe & C. Muell. in Linnæa, 1870, 513. Victoria, F. v. M.

H. perichætiale, Brid. Bryol. univ. I, 227.

Sealers' Cove, F. v. M.; Tasmania, Gunn.

H. Novæ Valesiæ, C. Muell. in Rev. Bryol., 1876, 3. Near Sydney, Kayser.

Mesotus, Mitten.

M. acutus, Mitten, M. alato similis, sed foliis densius areolatis margine magis serrulatis distinguendus.

Australia, inter Sphærophoron, from Borrer's Collect.

Dicranum, Hedwig.

1. * Isocarpus.

D. microcarpum, J. Hook. & Wils. in Fl. Tasm. II., 166; D. cirrhatum (Holomitrium), Mitt. in Kew Journ. of Bot. VIII., 257.

Tasmania, Archer.

2. ** Hemicampylus.

D. Menziesii, Taylor; D. brachypelma, C. Mueller. Tarwin, Grampians, F. v. M.

D. chlorocladum, C. Muell. in Rev. Bryol., 1876, 3. Near Sydney, Kayser.

D. subviride, C. Muell, in Linnæa, 1872, 515.

Near Sydney, Sieber.

D. dicarpum, Hornschuch; D. leucolomoides, C. Mueller in Bot. Zeit., 1851, 54.

Near Sydney, Sieber; Maitland, Vicary; Gippsland, F. v. M.; Brisbane-River, Bailey; Tasmania, Archer.

D. polychaetum, Hampe in Linnæa, 1859 p. 60. Yarra and Grampians, F. v. M. D. suberectum, Hampe in Linnæa, 1860, 629. Tarwin, F. v. M.

D. Walteri, Hampe.

Victoria, C. Walter.

D. angustinervis, Mitten.

Victoria, F. v. M.; Tasmania, Archer.

D. diaphanoneuron, Hampe & C. Muell. in Linnæa, 1870, 515.

Stirling's Range, F. v. M.

D. Billardieri, Schwaegrichen suppl. II, 70, t. 121.

Victoria, F. v. M.; Tasmania, Gunn.

D. pungens, J. Hook. & Wils. in Flora Antarct., 17, t. 59; subpungens, Hampe in Linnæa, 1860, 629.
Grampians, F. v. M.; Tasmania, Archer.

D. punctulatum, Hampe in Linnæa, 1860, 628. Australian Alps, F. v. M.

3. *** Eudicranum.

D. austrinum, Mitten; D. Sphagni varietas, J. Hook., Fl. Tasm. II., 171.

King George's Sound, Cunningham; interior of subtropical Australia, Sir Thomas Mitchell; Tasmania.

D. argutum, Hampe in Linnæa, 1870, 516. New South Wales, Hooker's Collection.

Eucamptodon, Montagne.

E. Muelleri, Hampe & C. Muell. in Linnæa XXXVI., 513. Victoria, F. v. M.

Dicnemon, Bridel.

D. rugosum, Hooker (Leucodon).

Australia, Dickson.

D. calycinum, Hooker (Leucodon).

Australia, Dickson.

D. enerve, C. Mueller in Revue Bryol., 1876, 3. Near Sydney, Kayser.

Ceratodon, Bridel.

C. purpureus, Bridel; convolutus, Reichardt.
Snowy River, Tarwin, Gippsland, F. v. M.; King
George's Sound, Cunningham; Ash Island,
Hunter River and Newcastle, Mrs. Forde.

C. stenocarpus, Montagne. Tasmania, Oldfield.

Tridontium, J. Hooker.

T. Tasmanicum, J. Hook. in Hook. Icon. Plant. rar. 248.
Tasmania, Gunn.

Pœcilophyllum, Mitten.

P. Leichhardti, Hampe & C. Muell. (Leucoloma) in Linnæa, 1870, 514.

New South Wales, Leichhardt; Victoria, F. v. M.; Brisbane River, Bailey.

Sclerodontium, Schwægrichen.—(Dicnemonella, Hampe and C. Mueller).

S. pallidum, Hook., Musci exot., 172 (Leucodon); Dicranum Sieberianum, Schw.

Victoria, F. v. M.; Port Jackson, Gaudichaud; Tasmania, Gunn.

S. Fraseri, Mitten, S. pallido simillimum, sed foliis nervolato crassiore, cellulis lævioribus, limbo marginis nullo. New South Wales, Fraser; Parramatta, Woolls.

Campylopus, Bridel.

C. introflexus, Hedw. (Dicranum); leptocephalum, C. Muell. in Linnæa, 1855, 206 (Dicranum).

Sealers' Cove, Gippsland; Goulbourne Ranges and Mt. Gambier, F. v. M.; King George's Sound, Cunningham; near Port Jackson, Sieber; Maitland, Vicary; Ash Island, Hunter River, Mrs. Forde.

C. pudicus, Hornschuch.

Near Port Jackson, Sieber.

C. bicolor, Hornschuch.

King George's Sound, Cunningham; Swan River, Drummond; Tasmania, Gunn.

C. clavatus, R. Brown in Schwgr. Suppl., 255.

Tasmania, R. Brown, Oldfield; near Sydney, Jupp.

C. appressifolius, Mitt. in J. Hook. Handb. Fl. N. Zeal., 414. New South Wales, Cunningham.

C. torquatus, Mitt. in J. Hook. Fl. Tasm. II., 173; flexuosus, Hampe in Linnæa, 1855, 206; pallidus, J. Hook. & Wils. in Fl. N. Zeal. II., 68, t. 84.

Tarwin, Victoria, F. v. M.; Richmond River, Camara; Tasmania, Archer; Bellenden Ker Range, Karsten.

C. nudus, Hampe in Linnæa, 1860, 630.

Tarwin, F. v. M.

C. capillatus, J. Hook. & Wils. in Fl. Tasm. II., 172. Tasmania, Oldfield, Stuart.

C. insidiosus, J. Hook. & Wils. in Fl. Tasm. II., 172. Tasmania, Oldfield, Stuart.

C. densifolius, Angstr., Oefvers, 1872, 4, 18. Wollongong, Professor Andersson.

C. Australiensis, Duby in Mem. de la Soc. de Phys. et d'Hist. Nat. de Genève, 1869. Locality unrecorded.

C. Erythropoma, Duby in Mem. Soc. Phys. Hist. Nat., 1869.

Victoria, F. v. M.

C. subtorquatus, C. Muell. in Rev. Bryol., 1876, 3. Sydney, Kayser.

II. GRIMMIEÆ.

Grimmia, Ehrhart.

1. * Schistidium.

G. apocarpa, Hedwig.

Australian Alps, F. v. M.; Tasmania, Archer.

G. mutica, Hampe in Linnæa, 1860, 631; apocarpa var. foliis muticis, in J. Hook. Fl. Tasm. II., 180.

Mount Wellington, Sealers' Cove, F. v. M.; Parramatta,

Woolls.

G. cyathocarpa, Hampe in Linnæa, 1872, 516.

Gippsland, F. v. M.; Blue Mountains, Mrs. Calvert.

G. flexifolia, Hampe in Linnæa, 1860, 632. Snowy River, F. v. M.

2. ** Eugrimmia.

G. trichophylla, Greville.

Tasmania, Hooker; Oldfield, Archer.

G. crispata, C. Muell. & Hampe in Linnæa, 1853, 498. Flinders Range.

G. funalis, B. & S.; J. Hook. Fl. Tasm. II., 180. Tasmania, Gunn. G. pulvinata, Hook. & Taylor, var. obtusa; G. cygnicolla, Tayl.

Swan River, Drummond; Australian Alps, Gippsland, F. v. M.; Tasmania, J. Hooker, Oldfield, Archer.

3. *** Guembelia.

Mitten, Musci Austr. Americ, 101.

G. leucophæa, Grev.; G. leiocarpa, Taylor.

Swan River, Drummond; Brisbane River, Bailey; Tasmania, Hooker, Archer.

G. callosa, C. Muell. & Hampe in Linnæa, 1853, 498. Barossa Range and Brown's Hill, F. v. M.

G. procumbens, Mitten; dioica, humilis, gracilis; folia patentia, lanceolata, nervo carinata, cellulis superioribus rotundis minutis inferioribus oblongis prædita; perichætialia longiora, erecta, dimidio inferiore amplexante pallidiore, dimidio superiore angusta, apice pilo brevi denticulato terminata; theca ovalis, lævis, in pedunculo ea duplo longiore exserta, operculum acuminatum; peristomii dentes perforati; annulus compositus.

Gippsland, Snowy River, F. v. M.

G. montanæ similis.

4. **** Dryptodon.

G. chlorocarpa, Mitten. Tasmania, Archer.

G. symphyodon, C. Mueller; G. emersa ejusd. in Bot. Zeit., 1851, 562.

Tasmania, Hooker, Archer, Mossmann.

G. crispula, J. Hook. & Wils. in Fl. Antarct, 124. Tasmania, Gunn, J. Hooker, Archer.

5. **** Rhacomitrium.

G. lanuginosa (Dill.), C. Mueller, Synops. I., 806. Australian Alps, F. v. M.

Var. pruinosa, in J. Hook. Fl. Tasm. II., 182. Tasmania.

G. Sundaica, C. Mueller. Queensland.

G. pseudo-patens, C. Mueller in Rev. Bryol, 1878, 3. Near Sydney, Kayser.

G. heterosticha, Hedwig, J. Hook. Fl. Tasm. II., 182. Tasmania. Glyphomitrium, Bridel.

G. Muelleri, Mitt. in Journ. of Proceed. Linn. Soc., 1859; Brachystelium Howeanum, Hampe.

Glasshouse Mountains, Moreton Bay, F. v. M.; Lord Howe's Island, Milne.

G. Adamsoni, Mitt. in Journ. Linn. Soc., 1859. Near Melbourne, Adamson.

G. acutifolium, J. Hook. & Wils. in Fl. Tasm. II., 180. South Australia, Prentice; Tasmania, J. Hooker,

Archer.
G. Australe, Hampe in Linnæa, 1855, 208.
Buchan River, F. v. M.

G. Mittenii, Jæger; G. serratum, Mitt. in J. Hook. Fl. Tasm. II., 181.

Tasmania, Archer.

III. LEUCOBRYEÆ.

Octoblepharum, Hedwig.

O. albidum (L.), Hedwig. Locality unrecorded.

Leucobryum, Hampe—(Sect. Pegophyllum, Mitt.).

L. brachyphyllum, Hampe.

Newcastle, Mrs. Forde; Parramatta, Woolls.; Sealers' Cove, F. v. M.; Moreton Bay, Bailey; Richmond River, Camara; Bellenden Ker Ranges, Karsten.

L. subchlorophyllosum, Hampe in Linnæa, 1876, 304.
Mount Warning, Guilfoyle.

L. spirostichum, C. Muell.; L. Teysmanni, fide Hampe. Near Sydney, Kayser.

L. candidum, Šchwægr, t. 187 (Dicranum). Tasmania, Archer.

IV. SYRRHOPODONTEÆ.

Syrrhopodon, Schwægrichen.

S. platycerii, Mitten.

Lord Howe's Island, Milne, also M'Gillivray.

S. Novæ Valesiæ, C. Muell. in Revue Bryol., 1876, 3. Near Sydney, Kayser.

S. fimbriatum, C. Mueller in Linnæa, 1872, 151. Brisbane River, A. Dietrich.

Thyridium, Mitten.

T. fasciculatum, Hook. & Grev. (Syrrhopodon); clavatus Schw.

N. S. Wales, G. Sieber.

Calymperes, Bridel.

C. latifolium, Hampe in Pl. Preiss, 1846, 116. Perth, Preiss; N. S. Wales.

C. Kennedyanum, Hampe in Linnæa, 1876, 303.

Rockingham Bay, Kennedy; Goode Island, Queensland, Powell.

V. TORTULEÆ.

Acaulon, C. Mueller.

A. Brisbanicum, C. Muell. in Linnæa, 1871, 144. Brisbane River, Dietrich.

A. integrifolium, C. Muell. in Bot. Zeit., 1855, 745. Yarra River, F. v. M.

A. turgidum, Mitt. in J. Hook. Fl. Tasm. Tasmania, Archer.

Phascum, Linné.

P. perpusillum, C. Muell. in Linnæa, 1871, 145. Brisbane River, Dietrich.

P. Drummondii, Wilson in Lond. Journ. Bot., 1848, 26, t. 1. Melbourne, Adamson.

P. cylindricum, Tayl. in Lond. Journ. Bot., 1846, 42. Swan River, Drummond.

Pottia, Ehrhart.

P. cæspitulosa, C. Muell. & Hampe (Anacalypta) in Linnæa, 1853, 491.

Near Mt. Lofty, also Yarra River, F. v. M. P. brevicaulis, Tayl. (Gymnostomum).

Swan River, Drummond.

P. brachyodus, Hampe in Linnæa, 1860, 624. Yarra River, F. v. M.

Weisia, Hedwig.

W. inflexa, Tayl. (Gymnostomum). Swan River, Drummond. W. nuda, Mitt.; humilis; folia a basi erectiora, subquadrata, pellucide areolata, patentia, oblongo-ligulata, acuta apiculatave, canaliculata planiusculave, nervo obscure flavo excurrente prædita, integerrima, cellulis rotundis densis obscuris areolata; perichætialia conformia; theca in pedunculo pallido ovalis, gymnostoma; operculum subulatum, theca brevius.

Trichostomo mutabili similis.

Moreton Bay, F. v. M.

W. bicolor, Hampe (Gymnostomum) in J. Hook. Fl. Tasm. II., 165.

Tasmania.

W. nudiflora, C. Muell. & Hampe in Linnæa, 1853, 496.

Bugle Range, F. v. M.; Yarra and Mount Abrupt,
F. v. M.

W. riparia, Hampe in Linnæa 1860, 626.

Gawler River, F. v. M.

W. flavipes, J. Hook. & Wils. in Fl. N. Zeal., 57,

Gippsland, F. v. M.; Tasmania, Gunn, Archer, Oldfield.

W. controversa, Hedwig. Tasmania, Archer.

Trichostomum, Hedwig.

T. cirrhatum, Hampe, Icones, 28.

Swan River, Preiss.

T. leptotheca, C. Muell. in Linnæa XXXV., 625. Gippsland, F. v. M.

Tortula, Hedwig.

1. * Trichostomum.

T. Knightii, Mitt. in J. Hook. Fl. Tasm. II., 174. Tasmania, Mossman.

2. ** Helicopogon.

T. pseudopilifera, Hampe in Linnæa, 1853, 493; T. luteola, Mitt. in Kew Journ. Bot. VIII., 258; T. pungens, J. Hook. & Wils. in Fl. Tasm. II., 175.

Darebin Creek and Gippsland, F. v. M.; Tasmania,

Oldfield, Archer, Gunn.

3. *** Pachynoma.

T. torquata, Taylor in Lond. Journ. Bot., 1846, 50. Swan River, Drummond; New South Wales, Woolls; Tasmania, Oldfield, Archer. T. adusta, Mitt. in Kew Journ. Bot. VIII., 258 (Desmatodon). Gippsland, F. v. M.

T. calcicola, Hampe, Icones, 29.

Fremantle, Preiss.

T. Australasica, Hook. & Grev.; T. rufiseta, Tayl.; T. fuscescens, J. Hook & Wils. (Trichostomum).

Swan River, Drummond.

T. rubiginosa, C. Muell. in Linnæa XXXV., 625 (Eutrichostomum).

Yarra River, F. v. M.

4. **** Leptopogon.

T. calycina, Schw. (Barbula).

Swan River, Drummond; King George's Sound, Cunningham; Queensland, Miss Gore; Arthur's Seat, F. v M.; Tasmania, Hummock Island, Bass' Straits. Milne.

Var. brevicaulis, Hampe; Sealers' Cove, F. v. M.

T. subcalycina, C. Muell. in Linnæa XXXV., 617. Brisbane River.

T. subtorquata, C. Muell. & Hampe in Linnæa, 1853, 492. Mount Gambier, F. v. M.; Australian Mosses, pl. III.

T. Tasmanica, Hampe in Linnæa, 1852.

Tasmania, Stuart.

T. brachyphylla, Hampe in Linnæa, 1860, 625.

Victoria, F. v. M.

T. Parramattana, Mitten; caulis humilis, innovans; folia sparsa, a basi erecta, subquadrata, pellucide areolata, oblongo-ligulata, patentia, canaliculata, nervo flavo obscuro in mucronem brevissimum excurrente prædita, integerrima, cellulis minutis densis obscuris areolata; perichætialia longiora, arcte convoluta, apice obtusa, pellucide areolata; theca in pedunculo longo flavo elliptica, erecta subarcuatave, operculo subulato subæquilonga; peristomium rubrum, elongatum; annulus compositus.

Parramatta, Woolls.

Caulis 2 to 3 mm. altus. Folia obscure viridia, parte patente 1 mm. longa, sicca incurva. Pedunculus 2 cm. longus. Statura T. convolutæ, foliis autem T. calycinæ.

5. ***** Desmatodon.

T. nervosa, Bridel.

Avon River, F. v. M.; Melbourne, Adamson; Tasmania.

T. recurvata, Hooker.

Tasmania, Oldfield.

T. crassinervia, Taylor. (Desmatodon); reflexidens, Hampe (Trichostomum) in Linnæa, 1860, 625.

Swan River, Drummond; Yarra and Avon Rivers,

F. v. M.

6. ***** Syntrichia.

T. fleximarginata, C. Muell. & Hampe in Linnæa, 1853, 493. Victoria, F. v. M.; Australian Mosses, pl. VI.

T. rubra, Mitten; T. serrulata, Mitt. in Kew Journ. Bot.

VIII., 258.

Australian Alps, F. v. M.

T. papillosa, Wilson.

Sealers' Cove, F. v. M.

T. breviseta, C. Muell. & Hampe in Linnæa, 1853, 492. Mt. Gambier, F. v. M.; Australian Mosses, pl. IV.

T. princeps (Syntrichia), De Notaris; T. antarctica, Hampe in J. Hook. Fl. Tasm. II., 175; T. cuspidata et rubella, J. Hook. & Wils., l. c.; T. panduræfolia, C. Muell. & Hampe in Linnæa, 1853, 493.

Victoria, F. v. M.; Australian Mosses, pl. V.

T. Latrobeana, C. Muell. & Hampe in Bot. Zeit., 1864, 358. Latrobe and Axe-River, F. v. M.; Tasmania, Archer.

Streptopogon, Wilson.

S. mnioides, Schw., t. 310 (Barbula); crispata, Hampe in Linnæa, 1876, 304.

Mount Macedon; Tasmania, Archer, Mossman.

Encalypta, Schreber.

E. Tasmanica, Hampe & C. Muell. in Linnæa, 1853, 491; australis, Mitt. et. vulgaris, var. in J. Hook. Fl. Tasm. II., 182; ciliata, Hedw. Mitt. in Kew Journ. Bot. VIII., 259.

Tasmania, Archer.

Pyramitrium, Hampe.

P. cristatum, Hampe in Linnæa, 1872, 513. Blue Mountains, Mrs. Calvert.

P. Novæ Valesiæ, Hampe in Linnæa, 1872, 513. Blue Mountains, Mrs. Calvert.

VI. ORTHOTRICHEÆ.

Orthotrichum, Hedwig.

O. laterale, Hampe in Linnæa, 1876, 309. Hume River, F. v. M.

O. Tasmanicum, J. Hook. & Wils. in Lond. Journ. Bot. VII., 27, t. 1.

Tasmania, Gunn, Oldfield, Archer, Mossman.

O. Lawrencei, Mitt. in J. Hook. Fl. Tasm. II., 188. Tasmania, Lawrence.

Ulota, Mohr.

U. lutea, Mitt. in J. Hook. Fl. Tasm. II., 184; crispa var., l. c.; crocea, Hampe (Orthotrichum).

Tasmania; Gunn, Hooker, Archer.

Macromitrium, Bridel.

1. * Macrocoma.

M. Eucalyptorum, C. Muell. & Hampe in Linnæa, 1853, 500; microphyllum, Hooker & Greville.
Victoria, F. v. M.; Toowoomba, Hartmann; Tasmania,

Archer.

M. Novæ Valesiæ, C. Mueller in Rev. Bryol., 1876, 3.
Near Sydney, Kayser.

M. Dæmelii, C. Mueller in Rev. Bryol., 1877, 43.

Queensland, Daemel; Toowoomba, Hartmann.

M. Geheebii, C. Mueller; Hampe in Linnæa, 1876, 308. Illawarra, Johnson.

2. ** Goniostoma.

M. pusillum, Mitten; J. Hook., Fl. Tasm. II., 183. Tasmania, Archer.

M. microstomum, Hook. & Grev.

Sealers' Cove, F. v. M.; Brisbane River, Bailey; Toowoomba, Hartmann.

M. Scottiæ, C. Muell. in Linnæa XXXV.

Ash Island, Hunter River, Miss Scott; Tasmania, Gunn.

M. asperulum, Mitt. in J. Hook. Fl. Tasm. II., 376. Tasmania, Lawrence.

M. Muelleri, Hampe (Macromitrium). Sealers' Cove, F. v. M. M. Archeri, Mitt. in J. Hook. Fl. Tasm. II., 183; M. linearifolium, C. Mueller.

Maitland, Vicary; Tasmania, Archer, Oldfield.

M. hemitrichodes, Schwægrichen, spec. musc. t. 136; G. amænum et Sieberi, Hornschuch.

Botany Bay, Dickson, Sieber; Ranges between the Burnett and Brisbane Rivers, F. v. M.; Ash

Island, Mrs. Forde.

M. intermedium, Mitt.; rami humiles; folia humiditate patenti-incurva, siccitate compacte contorta, sublanceo-lato-linearia, acuta, nervo carinata; cellulæ eorum ubique rotundatæ, parvæ, carnosulæ, distinctæ, fere læves; folia perichætialia breviora, lanceolata, acuta, erecta; theca in pedunculo 2-3 lineari ovalis; operculum subulatum; calyptra infra thecam descendens, multifida, appresse ramentosa.

Brisbane River, Bailey.

Very similar to G. hemitrichodes, but areolation different. M. diaphanum, C. Mueller in Linnæa, 1871, 151.

Brisbane River, Dietrich, Bailey.

M. Baileyi, Mitten; rami breves; folia humiditate erectopatentia, siccitate convoluta, oblongo-ligulata, nervo carinata, inferne cellulis oblongis pellucidis superne densis rotundatis obscuris formata; perichætialia breviora, erecta, ovata, acuta; calyptra ramentis paucis appressis pilosa.

Brisbane River, Bailey.

M. aurescens, Hampe in Linnæa, 1860, 633.

Dawson River, F. v. M.

M. spirale, Hampe.

Locality unrecorded.

M. Reinwardtii, Schw., t. 173; J. Hook. Fl. Tasm. II., 183. Tasmania, Gunn.

M. lingulare, Mitt. in Journ. Linn. Soc. IV., 78; G. weissioides, C. Muell. in Linnæa, 1871.

Ranges between the Burnett and Brisbane Rivers, F. v. M.; Brisbane, Bailey.

M. prorepens, Hook., Musci exot. 120.

Norfolk Island, Bauer.

3. *** Leiostoma.

M. involutifolium, Hook.

Ranges between the Rivers Burnett and Brisbane, F. v. M.; Toowoomba, Hartmann.

M. carinatum, Mitten; M. involutifolio simillimum sed paululum majus; folia magis carinata, basi cellulis paucis elongatis prædita, apice magis subcucullato-incurva; perichætialia conformia; theca infra os plicata, in pedunculo brevi exserta.

In M. involutifolium the capsule is smooth, the perichætial leaves are shorter than the cauline leaves and more

acuminated.

M. viridissimum, Mitten; M. involutifolio simile, sed elatius et ob folia longiora crassius; folia perichætialia superne angustiora, apicibus basin thecæ oblongo-cylindraceæ basi plicatæ fere attingentia; calyptra ramentis appressis obtecta.

Ranges between the Burnett and Brisbane Rivers,

F. v. M.; Toowoomba, Hartmann.

M. subulatum, Mitten; longe repens; rami curvati, ascendentes; folia humiditate patentia, arcuato-incurva, siccitate torta crispataque, rigidula, subnitentia, a basi elongate lanceolata, sensim longe subulato-angustata, acuta, nervo percurrente carinata, basi cellulis angustis elongatis inde ad apicem rotundatis prædita; perichætialia ovata, longius angustata; theca in pedunculo 2-3 lineari parva, ovalis, plicata; peristomii dentes lati pallidi.

Bass' Straits, Milne.

Habitus M. cirrhosi et a reliquis speciebus Australibus diversissimum.

M. sordido-virens, C. Muell. in Linnæa, 1871, 153. Brisbane River, Dietrich.

M. Tongense, Sullivant in American Expl. Exped., t. 5. Lord Howe's Island, Fullagar and Lind.

M. adstrictum, Angstroem, Œfvers, 1872, 4, 19; M. Owhaiense, C. Mueller, fide Jæger.
Wollongong, Prof. Andersson.

M. brevisetaceum, Hampe in Linnæa XXXVIII., 633. Lord Howe's Island, Fullagar and Lind.

Powellia, Mitten.

P. involutifolia, Mitt. in the Journ. Linn. Soc. X., 187; Australis, Hampe in Linnæa, 1870, 524 (Helicophyllum). Rockinghan Bay, Dallachy.

Zygodon, Hooker and Taylor.

Z. intermedius, Bruch and Shimper. Tasmania, Archer, Mossman.

- Z. brachypodus, Hampe & C. Muell. in Linnæa, 1855, 210. Sealers' Cove, F. v. M.
- Z. Brownii, Schw., t. 317.

Sealers' Cove, F. v. M.; Tasmania, Archer,

Z. Hookeri, Hampe in Linnæa, 1859, 60.

Grampians, F. v. M.

Z. minutus, C. Muell. & Hampe in Linnæa, 1855, 209. Sealers' Cove, F. v. M.

Z. anomalus, Dozy & Molkenbær; Z. Reinwardtii, Mitt. in J. Hook., Fl. Tasm. II., 185.

Tasmania, Oldfield.

Z. Menziesii, Schw., t. 137 (Codonoblepharum); Drummondii, Taylor.

Šwan River, Drummond; Melbourne, Adamson; Port Albert and Tarwin, F. v. M.; Tasmania Gunn, Archer, Oldfield.

Gymnocybe, R. Brown.

G. palustris, Mitten; Aulacomnion, Schwægrichen, J. Hook., Fl. Tasm. II., 192. Tasmania, Gunn.

Apalodium, Mitten.

A. lanceolatum, Mitt. in Kew Journ. Bot. VIII., 761 (Orthodontium).

Mount Wellington, Gippsland, F. v. M.; Tasmania,

Archer.

A. lineare, Taylor (Zygodon), Weissia pallens, Wilson. Swan River, Drummond.

A. australe, J. Hook. et Wils. in Fl. Antarct., t. 153. Tasmania, J. Hooker, Archer, Oldfield.

A. sulcatum, Hook. & Wils. Grampians, F. v. M.

VII. SPLACHNEÆ.

Tayloria, Hooker.

T. calophylla, C. Muell. in Bot. Zeit., 1851, 564 (Dissodon); robusta (Eremodon), J. Hook. et Wils.

Tasmania, Mossman.

T. octoblepharis, Hooker; cuspidata (Dissodon), C. Mueller. Tarwin, Sealers' Cove, F. v. M.; Tasmania, Archer, Oldfield.

Splachnum, Linné.

S. Gunnii, J. Hook. & Wils. in London Journ. of Bot. VII., 26, t. 1; Tetraplodon Tasmanicus, Hampe in Linnæa, 1876, 302.

Tasmania, Gunn, Schuster.

VIII. FUNARIEÆ.

Ephemerum, Hampe.

E. cristatum, Hook. & Wils. in Hook. Icon. pl. rar., t. 737 A.

Tasmania, Archer.

E. fimbriatum, C. Muell. in Linnæa, 1871, 145. Brisbane River, Dietrich.

Pleurophascum, Lindberg.

P. grandiglobum, Lindberg, in Journ. of Bot., 1875. Alps of Tasmania, Picton River, R. Johnston.

Leptangium, Montagne.

L. repens, Hook., Musci. exot., 106 (Anictangium).

Tasmania, Archer.

L. tumidum, Mitt.; folia oblongo-ovalia, cochleariformiconcava, margine late recurva, apice acuta vel apiculo brevi angusto terminata, enervia, cellulis oblongis carnosulis areolata.

Tasmania, Archer.

Caules 2 centim. alti, fusci. Folia 3 mm. longa, flavofusca. Quoad genus, fructu absente, dubium.

Physcomitrium, Bridel.

P. firmum, Mitt. in Kew Journ. Bot. VIII., 259. Delatite, F. v. M.

P. Brisbanicum, C. Muell. in Linnæa, 1871, 146. Brisbane River, Dietrich.

P. subserratum, C. Muell. in Linnæa, 1860, 623. Dargo River, F. v. M.

P. minutulum, C. Muell. in Linnæa, 1871, 147. Brisbane River, A. Dietrich.

P. conicum, Mitt. in J. Hook. Fl. Tasm. II., 197. Tasmania, Archer.

P. nodulifolium, Mitten; monoicum; caulis semiuncialis uncialisve; folia sparsa, erecto-patentia appressaque,

comalia patentia, oblongo-obovata, breviter apiculata, margine a medio ad apicem serrulata; nervus in apiculo evanescens; cellulæ oblongæ, limitibus nodulosæ; theca in pedunculo circiter 3 lineari erecta; theca subglobosa, collo æquilonga, ore paululum coarctata, satis magna sed non dilatata.

Near Moreton Bay, F. v. M. (1856).

Primo adspectu P. firmo simile, sed foliis serrulatis et areolatione diversissimum.

P. flaccidum, Mitten; caulis gracilis; folia patentia, flaccida, obovata, acuta, margine superne serrulata, nervo sub apice evanido prædita, cellulis teneris areolata; pedunculus gracilis; theca globosa, collo æquilongo attenuata, demum cyathiformis.

Ash Island, Hunter River, Newcastle, Mrs. E. Forde. Caulis 1 centim. altus. Folia 1 mm. longa. Pedunculus

5 mm. metiens.

P. integrifolium, Hampe & C. Mueller in Linnæa, 1853, 490.

Delatite, F. v. M.

Goniomitrium, Hooker and Wilson.

G. acuminatum, Hook. & Wils. in Lond. Journ. Bot., 1846, t. 3 B.

Swan River, Drummond; Clermont, Queensland, Miss Gore.

G. enerve, Hook. & Wils. in Lond. Journ. Bot., 1846. Swan River, Drummond.

Entosthodon, Schwægrichen.

E. clavæformis, C. Muell. & Hampe in Linnæa, 1853, 490. Torrens River, F. v. M.

E. laxus, J. Hook. & Wils. in Fl. Antarct., t. 151 (Physcomitrium).

Australian Alps, F. v. M.; Tasmania, Archer, Oldfield. E. apophysatus, Tayl. in Lond. Journ. Bot., 1846, 42; E.

Taylori, C. Muell., Syn. I., 122.

Swan River, Drummond; Queensland, Miss Gore; Yarra River and Gippsland, F. v. M.; Tasmania, Archer.

E. productus, Mitten in J. Hook. Fl. Tasm. II., 197.

Tasmania, Archer.

E. varius, Mitten; caulis brevissimus; folia in comam congesta, ovali-rotundata, breviter apiculata, immar-

G 2

ginata, integerrima, nervo infra apicem evanido prædita; theca in pedunculo subunciali clavata, subinæqualis; operculum fere planum, gymnostomum. Victoria, Adamson.

Species ambigua, foliis Funariæ hygrometricæ, thecis

Entosthodonti apophysato similior.

Funaria, Schreber.

1. * Plagiodus.

F. subnuda, Tayl. in Lond. Journ. Bot., 1846, 57.

Swan River, Drummond.

F. glabra, Tayl. in Lond. Journ. Bot., 1846, 57.; F. acaulis, Hampe in Linnæa, 1860, 624; F. radians, Mitt., in Kew Journ. Bot. VIII., 259.

Swan River, Drummond; Gippsland, F. v. M.; Tas-

mania, Archer.

F. Tasmanica, C. Muell. & Hampe in Linnæa, 1853, 490; F. v. M., Austr. Mosses, pl. 1.

Tasmania, Stuart.

F. crispula, J. Hook. & Wils. in Fl. Tasm. II., 198. Tasmania, Oldfield, Archer.

2. ** Eufunaria.

F. hygrometrica, Linné.

Maitland, Vicary; Brisbane River, Bailey; Ash Island, Hunter River, Mrs. E. Forde; Bellenden Ker Range, Karsten.

F. papillata, Hampe in Linnæa, 1876, 302.

Brisbane River, Slater.

IX. BARTRAMIEÆ.

Bartramidula, Bruch & Schimper.

B. pusilla, J. Hook. & Wils. in Lond. Journ. Bot., 1844, 545 (Glyphocarpa).

Tasmania, Lyall, Archer, Oldfield.

B. Hampei, Mitt.; Bartramia erecta, Hampe in Linnæa, 1876, 305.

Mount William, Sullivan.

Philonotis, Bridel.

P. appressa, J. Hook. & Wils.

Australian Alps, F. v. M.; Tasmania, Archer, Oldfield.

P. uncinatula, C. Muell. in Revue Bryol., 1876, 4. Near Sydney, Kayser.

P. atro-lutea, C. Muell. in Rev. Bryol., 1876, 4.

Near Sydney, Kayser. P. Slateri, Hampe in Linnæa, 1876, 306.

Brisbane River, Slater.

P. pallida, Hampe in Linnæa, 1876, 307. Sub-tropical East Australia, Eaves.

P. pseudo-mollis, C. Muell. in Linnæa, 1871, 150. Brisbane River, Dietrich.

P. tenuis, Tayl. in J. Hook. Fl. Tasm. II., 193. Tasmania, Oldfield.

P. fertilis, Mitt. in Kew Journ. Bot. VIII. 260. Mount Hotham, Australian Alps, F. v. M.

Breutelia, Schimper.

B. Sieberi, Hornschuch (Bartramia).

Near Port Jackson, Sieber 13; Mount Tomah, Cunningham; Tasmania, Archer, Oldfield.

B. pendula, Hook., Musci exot. 21 (Bartramia).

Near Port Jackson, Sieber 15; Tasmania, J. Hooker, Oldfield.

B. elongata, J. Hook. and Wils. (Bartramia). Tasmania, Archer.

B. comosa, Mitt. in J. Hook. Fl. Tasm. II., 195 (Bartramia).
Mt. Dromedary, N.S.W., Reader; Tasmania, Archer,
Mossman.

B. crassa, J. Hook. & Wils. in Fl. Tasm. II., 194 (Bartramia). Tasmania, Mossman, Archer.

B. affinis, Hook., Musci exot. 176 (Bartramia).

Victoria, Robertson; Snowy River and Buffalo Range, F. v. M.; Tasmania, Mossman, Archer, Oldfield.

B. divaricata, Mitt. in J. Hook. Fl. Tasm. II., 195 (Bartramia). Tasmania, Archer.

B. commutata, Hampe in Linnæa, 1876, 307 (Bartramia). Grampians, F. v. M.; Tasmania,

B. luteola, C. Muell. in Rev. Bryol., 1876, 4. Sydney, Kayser.

Conostomum, Swartz.

C. Australe, Swartz in Schrad., Neu. Journ. für Bot., 134. Tasmania, Archer.

C. curvirostre, Mitt. in Kew Journ. Bot. VIII., 260 (Bartramidula).

Munyang Mounts., Australian Alps, F. v. M.

C. pusillum, J. Hook. & Wils. in Fl. Antarct., t. 86;
C. parvulum, Hampe in Linnæa, 1855, 207.
Grampians, Victoria, F. v. M.; Tasmania, Archer, Oldfield.

Bartramia, Hedwig.

B. papillata, J. Hook. & Wils. in Fl. N. Zeal., t. 86;
B. acerosa, Hampe in Linnæa, 1855, 207.
Snowy River, F. v. M.; Mount Dromedary, Reader;

Tasmania, Archer.

B. fragilis, Mitt. in J. Hook. Fl. Tasm. II., 196. Tasmania, Archer.

B. strictifolia, Tayl. in Lond. Journ. Bot. V., 451 (1846). Swan River, Drummond.

B. Halleriana, Hedwig; B. Mossmaniana, C. Muell. in Bot. Zeit., 1851, 552.

Tasmania, Archer.

Meesia, Hedwig.

M. Muelleri, C. Muell. & Hampe in Linnæa, 1865, 208.; M. macrantha, Mitten. Cobberas Mountains, Australian Alps, F. v. M.

X. BRYEÆ.

Bryum, Linné.

1. * Dicranobryum. B. Preissianum, Hampe, Icones, 25.

Swan River, Drummond, Preiss.; Victoria, F. v. M.

2. ** Webera.

B. nutans, Schreber; B. longifolium, Hampe in Linnæa, 1855, 205.

Grampians, Cobberas and Snowy River, F. v. M.; Tasmania, Archer, Oldfield, Gunn.

B. nudiflorum, C. Muell. & Hampe in Linnæa, 1855, 205. Yarra River, F. v. M.

B. clavæforme, Hampe & C. Muell. (Pohlia) in Linnæa, 1870, 519.

Mount Disappointment, F. v. M., Taylor.

B. erythrocaule, Hampe in Linnæa, 1872, 516. Blue Mountains, Mrs. Calvert.

B. albicans, Wahlenberg.

Locality not recorded.

3. *** Leptobryum.

B. pyriforme, Hedwig.
Maitland, Vicary.

B. sericeum, Hampe in Linnæa, 1853, 494.

Tasmania, Stuart.

**** Brachymenium.

B. lanceolatum, J. Hook. & Wils. in Fl. Tasm. II., t. 173. Tasmania, Gunn.

***** Eccremothecium.

B. dichotomum, Hedwig; B. balanoides, Tayl.; B. pachytheca, C. Muell.

Swan River, Drummond; Yarra River, F. v. M.;

Tasmania, Gunn, Oldfield.

B. Gambierense, C. Muell. in Linnæa, 1871, 148. Mount Gambier, also in Victoria, F. v. M.

B. cupulatum, C. Muell. in Linnæa, 1871, 149.

Victoria, also Brown's Hill Creek on St. Vincent's Gulf, F. v. M.

B. pachypomatoides, Hampe. Locality unrecorded.

B. brevicaule, Hampe et C. Muell. in Linnæa XXXVI., 518. Locality unrecorded.

B. suberythrocarpum, C. Muell. in Bot. Zeit., 1856, 417. Rottnest, West Australia, Preiss.

B. subæneum, C. Muell. & Hampe in Linnæa, 1853, 494. Victoria, F. v. M.

B. macropelma, C. Muell. in Linnæa, 1871, 149.

South-West Australia, Preiss; Porongerup, F. v. M.

B. erythrocarpoides, C. Muell. & Hampe in Linnæa, 1853, 495.

Mt. Lofty Range, F. v. M.

B. subpachypoma, Hampe & C. Muell. in Linnæa, 1870, 518.

Rockingham Bay, Dallachy.

B. pyrothecium, Hampe in Linnæa, 1855, 205.

Sealers' Cove, Thomson River, Avon; Glenelg River, F. v. M.

B. inæquale, Tayl. in Lond. Journ. Bot., 1848, 53. Swan River, Drummond.

B. multicaule, Tayl. in Lond. Journ. Bot., 1848, 53.

Swan River, Drummond.

B. creberrimum, Tayl. in Lond. Journ. Bot., 1848, 53. Swan River, Drummond. B. argenteum, Linné, var. nivea.

Victoria, F. v. M.; Tasmania, Gunn.

B. subrotundifolium, Hampe in Linnæa, 1876, 512. Mt. Ararat, Sullivan.

B. subatropurpureum, C. Muell. in Linnæa, 1871, 147. Brisbane River, Dietrich.

B. chrysoneuron, C. Muell. in Bot. Zeit., 1851, 549; B. duriusculum, J. Hook. & Wils. Cobberas Mts., Austral. Alps, F. v. M., Tasmania.

B. curvicollum, Mitten; B. clavatum, J. Hook. & Wils., Fl. N. Zeal. 84, t. 85.

Tasmania, Archer, Gunn.

B. viridulum, C. Muell. in Rev. Bryol., 1876, 3.
Australia.

B. torquescens, Bruch & Schimper. Australia, F. v. M.

B. intermedium, W. & M.; J. Hook. Fl. Tasm. II., 189. Tasmania, J. Hooker.

B. pseudo-pallescens, Hampe & C. Muell. Locality unrecorded.

B. camptothecium, Taylor.

Swan River, Drummond; Mount William, F. v. M.

B. Australe, Hampe, Icones 26. Swan River, Preiss. Var. minor; Victoria, F. v. M.

B. rubiginosum, J. Hook. & Wils. in Fl. Tasm. II., 190. Tasmania, Gunn.

B. crassum, J. Hook. & Wils. in Fl. N. Zeal., t. 86.

Mount Hotham, Australian Alps, F. v. M.; Tasmania,

Archer, Gunn.

B. crassinerve, J. Hook. & Wils. Munyang Mountains, F. v. M.

B. blandum, J. Hook. & Wils. in Fl. Antarct., t. 60; var. luridum.

Tasmania, Gunn.

B. Tasmanicum, Hampe in Linnæa, 1852.

Tasmania, R. Brown, Archer, Mossman.

B. bimum, Schreber; J. Hook. Fl. Tasm. II., 190. Tasmania, Archer.

B. lævigatum, J. Hook. & Wils. in Fl. Antarct., t. 154. Tasmania, Lawrence, Archer, Gunn.

B. capillare, Hedwig.
Tasmania, Gunn.

B. obconicum, Hornschuch. Tasmania, Gunn. B. cæspiticium, L. var. crinitum, J. Hook., Fl. Tasm. II., 191. Tasmania, Gunn, Archer.

B. leucacanthum, Hampe.

Lord Howe's Island, Fullagar.

B. subtomentosum, Hampe & C. Muell. in Linnæa, 1870, 516.

Victoria, F. v. M.; near Melbourne, Adamson; Richmond River, Camara; Brisbane River, Bailey.

B. brachyaris, C. Mueller. Locality unrecorded.

B. albo-limbatum, Hampe & C. Muell. in Linnæa, 1870, 517.

Porongerup, West Australia, F. v. M. B. robustum, Hampe in Linnæa, 1860, 627.

Tarwin River, F. v. M.; Mt. Dromedary, Reader.

B. crispatum, Hampe in Linnæa, 1876, 310.

Between Cape Otway and Cape Patten, Walter.

B. olivaceum, Hampe in Linnæa, 1876, 311. Sub-tropical East Australia, Eaves.

B. leptothecium, Taylor; B. truncorum, Wilson in J. Hook. Fl. Tasm. II., 192.

Sealers' Cove, Gippsland, F. v. M.; Tasmania, Archer, Gunn, Mossman.

B. Billardieri, Schwægrichen.

Australian Alps, F. v. M.; Tomah, Cunningham; Tasmania, Archer, J. Hooker; Lord Howe's Island, Milne.

B. breviramulosum, Hampe in Linnæa, 1876, 311.

Mount Ararat, Sullivan.

B. subfasciculatum, Hampe in Linnæa, 1876, 312.

Sub-tropical East Australia, Eaves.

B. rufescens, J. Hook. & Wilson in Fl. Tasm. II., 192. Victoria, F. v. M.; Tasmania, Hooker, Gunn.

B. roseodens, C. Muell., Rev. Bryol., 1876, 3.

Near Sydney, Kayser.

B. Commersonii, Bridel, mant. musc., 119.

Logan River, Scortechini; Lord Howe's Island, Milne.

Mielichhoferia, Hornschuch.

1. * Leptochlæna.

M. microdonta, Mitten.

Gippsland, F. v. M.; Tasmania, Archer, Oldfield

2. ** Haplodontium.

M. Eckloni, Hornschuch; J. Hook. Fl. Tasm. II., 189. Tasmania, Gunn, Archer.

M. Australis, Hampe in Linnæa, 1855, 204, et 1860, 626. Gippsland and Grampians, F. v. M.

Leptostomum, R. Brown.

L. macrocarpum, R. Br. in Transact. Linn. Soc. X., 322. Norfolk Island, Cunningham.

L. inclinans, R. Br., l. c. 320, t. 23; L. flexipile, C. Mueller. Sealers' Cove and Grampians, F. v. M.; Mount Wellington, Tasm., R. Brown; Western Mountains, Archer.

Var. longiseta, Hampe in Linnæa, 1855, 206. Sealers' Cove, F. v. M.

Leptotheca, Schwægrichen.

L. Gaudichaudi, Schw., t. 186.

Grampians and Avon River, F. v. M.; Tasmania, J. Hooker, Oldfield, Archer.

Mnium, Dillenius.

M. rostratum, Schwægrichen; M. Novæ Valesiæ, C. Muell. in Rev. Bryol., 1876, 4. Near Sydney, Kayser.

Mittenia, Lindberg.

M. plumula, Lindberg; Mitten in J. Hook. Fl. Tasm. II., 187, t. 173 (Mniopsis).

Tasmania, Archer.

Hymenodon, J. Hooker et Wilson.

H. piliferum, J. Hook. & Wils. in Fl. N. Zeal., t. 92. Victoria, F. v. M.; Tasmania, Sir J. Hooker, Archer.

Rhizogonium, Bridel.

1. * Pyrrhobryum.

R. spiniforme, Bruch in Regensb. flora, 1846, p. 134.

Australian Alps, F. v. M.; Tasmania, Archer, Mossman; Bellenden Ker Range, Karsten; Ash Island, Mrs. Forde.

R. Parramattense, C. Muell., Synops. II., 255. Parramatta (herb. Kunze). R. Hookeri, C. Mueller; R. mnioides, Wils. var. contortum et var. lutescens, J. Hook. Fl. Tasm. II., 216; Mossmanianum, C. Muell. in Bot. Zeit., 1851, 547.

Mt. William and Sealers' Cove, F. v. M.; Tasmania,

Mossman, Archer.

2 ** Eurhizogonium.

R. distichum, Bridel, Bryol. univ. II., 665. Victoria, F. v. M.; Tasmania, Archer, Mossman.

R. Geheebii, C. Muell. in Rev. Bryol., 1876, 3.

Sydney, Kayser.

R. Novæ Hollandiæ, Bridel, Bryol. univ. II., 664. Victoria, F. v. M.; Tasmania, Archer.

R. aristatum, Hampe in Linnæa, 1876, 714.

Tasmania, Schuster.

R. gracillimum, Hampe in Linnæa, 1876, 314.

Buchan River, F. v. M.; between Cape Otway and Cape Patten, Walter.

R. Muelleri, Hampe in Linnæa, 1855, 211. Mt. William and Sealers' Cove, F. v. M.

R. bifarium, Schimper in der Bot. Zeitung, 1844, p. 125.

Tasmania, Oldfield.

R. undulatum, Lindberg, Œfvers af F. Vet. Soc. Foerh., 1869.

Parramatta, Woolls; Sydney, F. v. M.; Twofold Bay,

Mossman; Ash Island, Hunter River, Mrs.

Forde; Brisbane River, Bailey.

R. taxiforme, Hampe in Linnæa, 1876, 313.

Johnston River, Fitzalan.

3. *** Goniobryum.

Lindberg in der Hedwigia, 1863, p. 21—Photinophyllum, Mitten.

R. pellucidum, Mitten; reticulatum, Hampe in Linnæa, 1860.

Apollo Bay, F. v. M.; Tasmania, Archer. R. subbasilare, Hook., Musci. exot. 10 (Hypnum). Tasmania, Gunn, Archer.

XI. HYPOPTERYGIEÆ.

Cyathophorum, Beauvois.

C. pteridioides, Beauvois; C. pennatum, Bridel. Victoria, F. v. M.; Tasmania, Archer, Gunn, Oldfield.

Hypopterygium, Bridel.

1. * Lopidium.

H. concinnum, Hooker.

Sealers' Cove, F. v. M.

H. nematosum, C. Muell. in Journ. Mus. Godefr. Heft. VI., 30. Mount Elliot, Kayser.

H. pallens, J. Hook. & Wils. in Fl. N. Zeal., 119.

Victoria, F. v. M.; Tasmania, R. Brown, Gunn, Oldfield, Archer, Stuart.

H. planatum, Hampe in Linnæa, 1874, 672. Mount Elliot, Kayser.

2. ** Catharomnion.

H. ciliatum, Hedw. (Pterygynandrium).
Tasmania, Gunn.

3. *** Euhypopterygium.

H. Muelleri; Hampe in Linnæa, 1855, 215.

Buchan River, F. v. M.; Brisbane River, Bailey.

H. discolor, Mitten; H. Scottiæ, C. Muell. in Linnæa XXXV., 619.

Parramatta, Woolls; Ash. Isl., Hunter River, Mrs. Forde; Moreton Bay and Mt. Gambier, F. v. M.

- H. Novæ Zealandiæ, C. Mueller in Bot. Zeit., 1851, 367; H. Smithianum, J. Hook. & Wils. in Fl. N. Zeal. II., 118. Sealers' Cove, F. v. M.; Tasmania, Hooker, Archer, Oldfield.
- H. glaucum, Sullivant in Amer. Expl. Exp., 26; H. Smithianum var., J. Hook. & Wils. in Fl. N. Zeal. II., 118.

 Tasmania, Archer.

H. viridulum, Mitt. in J. Hook. Handb. Fl. N. Zeal. II., 487.
Ash Island and Hunter River, Mrs. Forde; Brisbane
River, Bailey.

H. oceanicum, Mitt. in J. Hook. Handb. Fl. N. Zeal. II., 487; H. Norfolkianum, C. Muell.

Norfolk Island, Cunningham, Thompson, Milne.

XII. RHACOPILEÆ.

Rhacopilum, Bridel.

R. strumiferum, C. Mueller in Bot. Zeitung, 1851, 563; R australe, J. Hook, and Wils. in Fl. N. Zeal., 121.

Tasmania, Archer.

R. crinitum, Hampe & C. Muell. in Linnæa, 1870, 526.

Porongerup, West Australia, F. v. M.

R. convolutaceum, C. Mueller, Synops. II., 13; R. cristatum, J. Hook. & Wils. in Fl. N. Zeal., 121.

Ranges between the Burnett and Brisbane Rivers, F. v. M.; Richmond River, Camara; Norfolk Island, Thompson; Ash Island, Mrs. Forde.

R. purpurascens, Hampe in Linnæa, 1876, 326.

Near Melbourne and on Mt. Elephant, F. v. M.

R. æruginosum, C. Mueller in Rev. Bryol., 1877, 43. Toowoomba, Hartmann.

XIII. HOOKERIEÆ.

Daltonia; Hooker and Taylor.

D. pusilla, J. Hook. and Wils. in Fl. Tasm. II., 221. Tasmania, Oldfield.

Distichophyllum, Dozy & Molkenboer.

1. * Mniadelphus.

D. apiculatum, J. Hook. & Wils. in Fl. N. Zeal., t. 93 (Hookeria). Tasmania, Gunn.

D. complanatum, Hampe in Linnæa, 1876, 320. Johanna River, near Cape Otway, F. v. M.

D. subrotundum, Hampe in Linnæa, 1876, 320. Mt. Disappointment, F. v. M.

D. microcarpum, Hedw. (Hypnum). Tasmania, Archer, Gunn.

D. sinuosum, J. Hook. & Wils. in Fl. Tasm. II., 219. Tasmania, Gunn, Oldfield.

2. ** Discophyllum.

D. pulchellum, J. Hook. & Wils. in Fl. Antarct., t. 62. Tasmania, Gunn, Archer.

D. crispulum, J. Hook. & Wils. in Fl. N. Zeal., t. 93. Tasmania, Archer.

D. amblyphyllum, J. Hook. & Wils. in Fl. N. Zeal., t. 93. Tasmania, Gunn.

D. Zetterstedtii, C. Muell. in Linnæa, 1871, 158. Victoria, F. v. M.

Hookeria, Smith.

(Cyclodictyon, Mitten.)

H. lepida, Mitten; folia lateralia obovata ovaliave obtusa, apiculo brevi terminata; intermedia late ovalia, acuta; omnia binervia, limbo angusto integerrimo marginata, cellulis hexagonis limpidis areolata.

Bellenden Ker's Range, Karsten.

Folia pallide viridia, 1 mm. longa; Fructus ignotus, genus igitur dubium.

Sauloma, J. Hooker & Wilson.

S. tenellum, J. Hook. & Wils. in Fl. N. Zeal., t. 92 (Hookeria).

Bunyip Creek, F. v. M.; Tasmania, Hooker, Archer, Gunn, Oldfield.

Pterygophyllum, Bridel.

P. Hookeri, Jæger II., 247; Pt. obscurum, Mitt. in J. Hook. Fl. Tasm. II., 220, t. 177.

Tasmania, Archer.

P. denticulatum, J. Hook. & Wils.

Tasmania, Gunn.

P. nigellum, J. Hook. & Wils. in Fl. N. Zeal., t. 93 (Hookeria); H. hepaticifolia, C. Muell. & Hampe in Linnæa, 1853, 503.

Tasmania, Sir J. Hooker; Dandenong Ranges, Steep Bank River, Bunyip Creek, and many other places in ferntree-gullies, F. v. M.

XIV. ERPODIEÆ.

Erpodium, Bridel.

E. Hodgkinsonianum, Hampe & C. Mueller. Richmond River, Mrs. Hodgkinson.

XV. NECKEREÆ.

Hedwigia, Ehrhart.

1. * Euhedwigia.

H. ciliata, Ehrhart in Hannov. Magaz., 1781, p. 109; H. microcyathea, C. Muell. in Bot. Zeit., 1851, 564 et forsan H. Jaratzkæ, C. Muell., Rev. Bryol., 1876, 3.

Ingogobbi, Australian Alps, F. v. M.; near Sydney, Kayser; Tasmania, Hooker, Mossman.

2. ** Hedwigidium.

H. imberbis, Sm. (Gymnostomum); H. Drummondi, Tayl. (Schistidium); J. Hook. Fl. Tasm. II., 179 et forsan H. emersa, Hampe & C. Mueller.

Swan River, Drummond; Tasmania, Archer.

Rhacocarpus, Lindberg.

R. Humboldti, J. Hook. & Wils. in Fl. Tasm. II., 179 (Hedwigia); H. Australis, Hampe in Linnæa, 1860, 636.

Swan River, Drummond; Grampians, F. v. M.;

Tasmania, Archer, Hooker, Gunn.

Lasia, Bridel.

L. subproducta, C. Muell. in Rev. Bryol., 1877, 43.
Parramatta, Woolls; Toowoomba, Hartmann.

L. Australis, C. Muell. in Linnæa, 620.

Ash Island, Hunter River, Mrs. E. Forde; Toowoomba, Hartmann; Brisbane River, F. v. M.

Cryphæa, Bridel.

1. * Eucryphæa.

C. brevidens, C. Muell. in Rev. Bryol., 1876, 4. Near Sydney, Kayser.

C. tenella, Hornschuch.

New South Wales, Sieber.

C. crenulata, Mitt. in Journ. Linn. Soc., 1859. Tarwin, Gippsland, F. v. M.; Tasmania, Archer.

2. ** Philudora.

C. ovalifolia, C. Muell. in Bot. Zeit., 1851.

Twofold Bay, Mossman; Parramatta, Woolls; Brisbane River, Bailey.

C. squarrulosa, Hampe in Linnæa, 1860, 636.

Gippsland, Tarwin, F. v. M., Australian Mosses, pl. XI.

C. Muelleri, Hampe in Linnæa, 1851, 212 (Dendropogon); C. dilatata, Mitt. in Kew Journ. Bot. VIII., 263. Buchan River and Moreton Bay, F. v. M.

C. Tasmanica, Mitt. in J. Hook. Fl. Tasm. II., 204. Tasmania, Archer. C. imbricata, J. Hook. & Wils. in Fl. Tasm. II., 202 (Leskea).

Tasmania, Oldfield.

Bescherellia, Duby.

B. brevifolia, Hampe in Linnæa, 1876, 317.

Toowoomba, Slater; Brisbane, Bailey; Riverina,

Dangar.

B. cyrtopus, F. v. Mueller; Cyrtopus bescherellioides, C. Mueller in Rev. Bryol., 1876, 4.

Near Sydney, Kayser.

Spiridens, Nees ab Esenbeck.

S. Muelleri, Hampe in Rev. Bryol. 1875, 118; perhaps S. capilliferus, Mitten.

Mt. Lidgbird, Lord Howe's Island, C. Moore.

Lepyrodon, Hampe.

L. Lagurus, Hook., Musci. exot., t. 126 (Leucodon). Mt. Latrobe, Australian Alps; Tasmania, Hooker, Archer, Oldfield.

Garovaglia, Endlicher.

1. * Euptychium.

G. cuspidata, Mitt. in Kew Journ. Bot. VIII., 263 (Esenbeckia); Euptychium Neo-Caledonicum, Schimper. Moreton Bay, F. v. M.; Brisbane River, A. Dietrich.

G. mucronata, Hampe in Linnæa, 1874, 666. Lord Howe's Island, Fullagar and Lind.

G. robusta, Hampe in Linnæa, 1874, 667. Lord Howe's Island, Fullagar and Lind.

G. Muelleri, Hampe in Linnæa, 1876, 318 (Endotrichum). Tropical East Australia, Eaves.

2. ** Endotrichella.

G. lepida, C. Muell. in Linnæa, 1871, 157. Herbert's River, Dallachy.

G. Dietrichiæ, C. Muell. in Linnæa, 1871, 155. Brisbane River, A. Dietrich.

- 3. *** Cladomnion, (J. Hooker & Wilson; Ptychothecium, Hampe; stereodon, Mitten).
- G. sciuroides, Hook., Musci. exot. 175 (Leskea); G. glyphotheca, C. Muell. in Linnæa, 1855, 212 (Neckera); G.

Muelleriana, Hampe in Linnæa, 1860, 637 (Glyphothecium).

Tasmania, Sir J. Hooker; Tarwin, Gippsland, F. v. M.

Ptychomnion, J. Hook. and Wils.

P. aciculare, Labill (Hypnum), Brid.

New South Wales, Capt. Cartwright; Victoria, F. v. M.; Tasmania, Lyall, Gunn, Archer, Oldfield.

Pterobryum, Hornschuch.

1. * Calyptothecium.

P. Australinum, Mitten; rami pinnati, frondiformes, stipitati; folia (e medio frondis) complanata, patentia; media ovata, apice late acuta; lateralia complicata, infra apicem parum excavata, omnia nervo tenui ultra medium evanido prædita, margine, integerrima, cellulis oblongis pellucidis areolata.

Islands of Moreton Bay, F. v. M.

Fronds 3 inches high, about 2 millimetres wide, where the foliage is most fully developed. In colour pale-

green, scarcely shining.

P. humile, Mitt.; P. Australino simillimum, sed folia (e medio frondis) oblonga, obtusa; lateralia complicata; omnia nervo tenui, supra medium evanido prædita, margine apicem versus subserrulata, cellulis oblongis areolata.

Richmond River, Henderson.

P. acutum, Mitt.; folia (e medio frondis) ovata, apice obtuse acuminata, lateralia breviter acutata et complicata, omnia basi cordato-auriculata, nervo tenui supra medium evanido instructa, apice serrulata, cellulis elongatis areolata.

Richmond River, Henderson.

P. duplicato similior.

2. ** Trachyloma.

P. planifolium, Hook. (Neckera).

Parramatta, Woolls; Tasmania, Mossman.

P. Muelleri, Hampe.

Apollo Bay, F. v. M.

P. diversinerve, Hampe.

Yarra River, F. v. M.

3. *** Braithwaitea (Lindberg; Dendro-Leskea, Hampe).

P. sulcatum, Hook. Musc. exot., t. 164 (Leskea); Pt. nematosum, C. Muell. in Linnæa XXXV., 615 (Pilotrichum).

Near Port Jackson, R. Brown; Ranges between the Burnett and Brisbane Rivers, F. v. M.; Brisbane River, Bailey.

Meteorium, Bridel.

M. Kermadecensis, C. Muell. in Bot. Zeit., 1857, 779; M. Hornschuchii, Mitt. (Trachypus); M. cuspidiferum, Taylor in J. Hook., Fl. Tasm. II., 203.

Tasmania, Hooker, Gunn, Oldfield, Archer.

M. Eavesianum, Hampe in Linnæa, 1876, 219 (Neckera, Pilotrichella).

Sub-tropical East Australia, Eaves.

M. limbatum, Ĉ. Muell. & Hampe in Linnæa, 1853, p. 502; M. cerinum, J. Hook. et Wils. in Fl. Tasm. II., 203.

Victoria, F. v. M.; Ash Island, Hunter River, Mrs. E. Forde; Maitland, Vicary; Tasmania, Archer.

M. filipendulum, J. Hook. et Wils. in Fl. Tasm. II., 203; Neckera Scottiæ, C. Muell. in Linnæa XXXV., 621 (Papillaria).

Ash Island, Hunter River, Mrs. E. Forde; Brisbane,

Bailey; Tasmania, Gunn.

M. amblyacis, C. Muell. in Linnæa XXXVI., 521.

New South Wales, Leichhardt; Brisbane River,

Bailey.

M. flexicaule, Tayl. in J. Hook. Fl. N. Zeal., 101.; M. squamatum, C. Muell. & Hampe in adnot. ad M. amblyacem, in Linnæa XXXVI., 522, probably also.

Australia, Tasmania, Archer.

M. Reginæ, Hampe in Linnæa, 1876, 319 (Neckera, Pilotrichella).

Toowoomba, Hartmann.

M. dimorphum, C. Muell. in Linnæa, 1873, 516.
Blue Mountains, New South Wales, Mrs. Calvert.

M. fulvum, Mitt. in Journ. Linn. Soc., 1859.

Tarwin, F. v. M.

M. molle, Hedwig (Leskea). Tarwin, F. v. M.

M. Billardieri, Hampe. Gippsland, F. v. M.

M. trichophoroides, Hampe in Linnæa, 1874, 668. Lord Howe's Island, Fullagar and Lind. M. compressum, Mitten; rami elongati, flexuosi, ramulis irregularibus remotis pinnati, saepe attenuati: folia appressa, a basi amplexante subcordata oblongo-lanceolata, in ramulis longius et tenuissime flexuoso-angustata, remote denticulata, inferne crenulata, cellulis angustis unipapillatis areolata, enervia.

Brisbane River, Bailey.

Neckera, Hedwig.

N. aurescens, Hampe in Linnæa, 1855, 212; N. leptotheca, Mitt. in Hook. Kew Journ. VIII., 263. Tarwin and Brodribb Rivers, F. v. M.

N. hymenodonta, C. Muell. in Bot. Zeit., 1851, 564; N. pennata, var. Tasmanica, Hampe in Linnæa, 1852; N. pennata, Wilson in J. Hook. Fl. Tasm. II., 204.

Tasmania, Mossman, Archer.

N. Leichhardti, Hampe & C. Muell. in Linnæa, 1870, 520. New South Wales, Leichhardt.

Homalia, Bridel.

H. falcifolia, J. Hook. et Wils. in Fl. N. Zeal., t. 92. Tasmania, Gunn.

Porotrichum, Bridel.

(Camptochæte, Reichardt; Lembophyllum, Lindberg; Cœlidium et Isothecium, J. Hook. et Wils.; Thamniella, Bescherelle.)

P. arbusculum, Hook. (Neckera).

Tasmania, Archer, Gunn, Oldfield.

P. fruticosum, Mitten; P. arbusculo simillimum, sed foliis ovalibus acutioribus et theca in pedunculo elongato pendula dignoscendum.

Tasmania, Gunn.

P. divulsum, J. Hook. and Wils. in Fl. N. Zeal., t. 90.
Tarwin, F. v. M.; Tasmania, Lawrence, Gunn, Archer, Oldfield.

P. deflexum, Mitten in Muscis Stephensonii; Dendro-Hypnum Leichhardti, Hampe in Linnæa, 1876, 523 (probably).

Sealers'Cove, F. v. M.; New South Wales, Leichhardt.

P. vagum, Hornsch. (Hypnum); P. assimile, Hampe; P. Schlosseri, Sendtner.

Richmond River, Henderson; Parramatta, Woolls; Brisbane River, Bailey; Tasmania, Archer.

P. ramulosum, Mitt. in Kew Journ. of Bot. VIII., 253; P. chlorocladium, C. Muell. in Linnæa XXXV., 622.

Steep Bank and Tarwin River, Apollo Bay, F. v. M.; Brisbane River, Bailey; Bellenden Ker's Range, Karsten.

P. clandestinum, J. Hook. et Wils. in Fl. N. Zeal., t. 90. Sealers' Cove, F. v. M.

P. cochlearifolium, Schw., t. 88 (Hypnum). Tasmania, Archer, J. Hooker.

P. gracile, J. Hook. et Wils. in Fl. Antarct., t. 61. Tasmania, Archer.

P. decurvatum, Hampe.

Locality unrecorded.

P. pseudo-pilaceum, Hampe. Locality unrecorded.

P. orbiculare, Hampe.

Locality unrecorded.

P. Novæ Cambriæ, Hampe. Locality unrecorded.

Thamnium, Schimper.

T. pandum, J. Hook. et Wils. Parramatta, Woolls.

T. flagellare, Angstræm in der Hedwigia, 1875, p. 66. Australia.

T. eflagellare, Angstræm in der Hedwigia, 1875, p. 66. Sydney.

T. pumilum, J. Hook. et Wils. in Fl. Tasm. II, 206 (Isothecium); T. rivale, Mitten.

Tasmania, Archer.
T. perpusillum, C. Mueller.

Australia.

XVI. SEMATOPHYLLEÆ.

Rhaphidorrhynchum, Schimper.

R. Joliffii, Mitt. in J. Hook. Fl. Tasm. II., 213. Tasmania, Archer.

P. homomallum, Hampe, Icon., 6; Leskea Drummondii,

Taylor.

Swan River, Drummond, Preiss; King George's Sound, Cunningham; St. Vincent's Gulf and Sealers' Cove, F. v. M.; Tasmania, Gunn, Oldfield, Hooker.

R. contiguum, J. Hook. et Wils. in Fl. Tasm. II., 213; R. subhomomallum, C. Muell. in Bot. Zeit., 1857, 781.

New South Wales, R. Brown; Brisbane River, Bailey;

Lord Howe's Island, M'Gillivray.

R. cerviculatum, J. Hook. et Wils. in Fl. N. Zeal., t. 91. Tasmania, Archer, Gunn.

R. limatum, J. Hook et Wils. in Fl. Tasm. II., 213. Tasmania, Lyall, Archer, Oldfield; Gippsland, F. v. M.

R. calidioides, C. Muell. in Linnæa, 1856, 213.

Sealers' Cove, F. v. M., Australian Mosses, pl. XIV.

R. tenuirostre, Hook., Musci exot. 111 (Hypnum). Tasmania, Gunn, Oldfield.

R. splendidula, Hampe (Leskea). Locality unrecorded.

Acanthocladium, Mitten.

(Acanthodium, Mitten olim.)

A. extenuatum, Bridel (Hypnum); H. crinitum, J. Hook. et Wils.; Leskea amblyocarpa, Hampe in Linnæa, 1860 (probably).

Bunyip Creek, F. v. M.; Macquarie River, Ball;

Tasmania, Archer, Gunn.

XVII. STEREODONTEÆ.

Entodon, C. Mueller.

E. pallidus, Mitt. in Seem. Fl. Vit., 398.

Brisbane River, Bailey; Queensland, Miss Gore.

E. Tasmanicus, Mitten; robustus; caulis quadriuncialis; folia compressa, ovata, acuta, apice serrulata.

Hobarton.

E. Hartmanni, C. Muell. in Rev. Bryol., 1877, p. 4. Toowoomba, Queensland, Hartmann.

E. Novæ Valesiæ, Hampe. New South Wales.

E. Myosurella, C. Muell. in Rev. Bryol., 1876, p. 4. Near Sydney, Kayser.

E. Mackayensis, C. Muell. in Linnæa XXXVII., 155. Port Mackay, A. Dietrich.

E. Dæmelii, C. Mueller.

Gayndah, Queensland, Dæmel.

Plagiothecium, Bruch & Schimper.

P. denticulatum, Linn. (Hypnum).

Tarwin River and Australian Alps, F. v. M.; Tasmania, Oldfield.

P. lamprostachys, Hampe in Linnæa, 1859, 60 (Platy-hypnum).

P. Howeanum, C. Mueller (Hypnum).

Lord Howe's Island, Fullagar and Lind.

Acroceratium, Mitten.

A. auriculatum, Montagne; Hypnum chlamydophyllum, J. Hook. et Wils. in Fl. Antarct., t. 61.

Tarwin River, F. v. M.; Tasmania, Archer.

A. politum, J. Hook. et Wils. in Fl. Antarct., t. 154 (Hypnum); callichroum, Mont. (Phyllogonium); elegans, Hampe (Phyllogonium) in Linnæa, 1855, 212; Mitt. in Kew Journ. Bot. VIII.; Hampeanum, C. Muell. in Linnæa, 1869, 29 (Orthorhynchium).

Sealers' Cove, F. v. M.; Tasmania, Gunn, Mossman,

Oldfield.

Isopterygium, Mitten.

I. molliculum, Sullivant in U. S. Explor. Exp., t. 11; C. Muell. in Linnæa, 1871, 160; Hypnum Norfolkianum; H. nitidulum, Hampe et C. Muell. in Linnæa, 1870, 524 (Platyhypnum).

Norfolk Island, Thompson; Lord Howe's Island,

M'Gillivray.

I. umbilicatulum, C. Muell. in Rev. Bryol., 1876, 4.

Near Sydney, Kayser.

I. candidum, C. Muell. in Rev. Bryol., 1876, 4.

Near Sydney, Kayser.

I. Walterianum, Hampe in Linnæa, 1876, 322.

Mt. Macedon, Walter.

I. austro-pusillum, C. Mueller in Linnæa, 1872, 159 (Platy-hypnum, Hampe).

Brisbane River, A. Dietrich.

Amblystegium, Schimper.

A. riparium, Linné (Hypnum); H. Muelleri, C. Muell. & Hampe in Linnæa, 1853, 504.

Latrobe River and Lake Wellington, F. v. M.

A. uncinatum, Hedwig; Hypnum pseudo-uncinatum, Hampe in Linnæa, 1860, 639.

King George's Sound, Cunningham.

A. decussatum, J. Hook. et Wils. in Fl. N. Zeal., t. 90. (Hypnum).

Tasmania, Gunn.

A. oblongifolium, Hampe in Linnæa, 1860, 641. South Esk River, Tasmania, F. v. M.

A. fluitans, L. (Hypnum); Hypnum pseudo-fluitans, Hampe. Tasmania, Gunn.

A. convolutifolium, Hampe in Linnæa, 1859, 641 (Serpenti-Hypnum).

Dargo, F. v. M.

A. fontinaloides, Hampe in Linnæa XXXVII., 518.
Blue Mountains, Mrs. Calvert.

Stereodon, Bridel.

S. chrysogaster, C. Mueller; Hypnum patale, J. Hook. and Wils. in Fl. N. Zeal., t. 90. Tasmania, Archer.

S. cupressiforme, L. var. minor, J. Hook., Fl. Tasm. II., 212; H. Mossmanianum, C. Muell. in Bot. Zeit., 1851, 565. Sealers' Cove, F. v. M.; Tasmania, Archer, Gunn.

S. leucochlorum, Hampe in Linnæa XXXVIII., 669. Lord Howe's Island, Fullagar and Lind.

S. Walterianum, Hampe. Victoria, Walter.

Ectropothecium, Mitten.

E. Slateri, Hampe in Linnæa, 1876, 321 (Hypnum). Brisbane River, Slater.

E. Hillianum, Hampe in Linnæa, 1876, 322 (Hypnum). Queensland, W. Hill.

E. cygnisetum, C. Mueller. Locality unrecorded.

XVIII. HYPNEÆ.

Fabronia, Raddi.

F. Hampeana, Sonder; Hampe, Icon., 13; F. incana, Taylor. Swan River, Drummond, Preiss.

F. Australis, Hook., Musc. Exot., 160. King George's Sound, Menzies. F. Scottiæ, C. Muell. in Linnæa XXXV., 620. Ash Island, Hunter River, Mrs. E. Forde.

F. Tayloriana, Hampe in Linnæa, 1870, 522.

Mt. Disappointment, Taylor; M'Arthur's Creek, on Casuarina, F. v. M.

Stereophyllum, Mitten.

S. lepturum, Tayl. (Hypnum).
Swan River, Drummond; King George's Sound,
Cunningham.

Rhynchostegium, Schimper.

R. tenuifolium, Hedwig; Hypnum collatum, J. Hook. and Wils. in Fl. Tasm. II., 209; H. Megapolitanum, Hampe in Linnæa, 1855, 213.

Sealers' Cove, F. v. M.

R. subclavatum, Hampe. Sealers' Cove.

R. antipodum, Hampe.
Locality unrecorded.

R. dentiferum, Hampe in Linnæa, 1859, 60. Gippsland, F. v. M.

R. patulum, Hampe in Linnæa, 1872, 162.

Gippsland, Walter.

R. laevisetum, Geheeb in Rev. Bryol., 1876, p. 4. Sydney, Kayser.

R. obtusum, Geheeb in Rev. Bryol., 1876, p. 4. Sydney, Kayser.

R. latifolium, Geheeb in Rev. Bryol., 1876, 4. Sydney, Kayser.

R. distractum, Hampe in Linnæa, 1860, 642. Sealers' Cove, F. v. M.

R. luxatum, Mitt. in Kew Journ. Bot. VIII., 264. Gippsland, F. v. M.

R. pseudo-stramineum, Hampe in Linnæa, 1872, 518. Blue Mountains, Mrs. Calvert.

R. cucullatum, Mitt. in Kew Journ. Bot. VIII., 265.
Dargo River, F. v. M.

R. incurvum, Hampe in F. v. M. fragm. XI., suppl. 51 (Hypnum).

Locality unrecorded.

R. Parramattense, Hampe & C. Mueller (Hypnum). New South Wales. R. erythropodium, Hampe in Linnæa XXXVII., 161 (Hypnum).

Rockingham's Bay, Dallachy.

R. strumiferum, Hampe in F. v. M., fragm. XI., suppl. 51. Locality unrecorded.

R. congruens, Hampe in Linnæa, 1858, 643; F. v. M., Austr. Mosses, pl. XIII.

Victoria Ranges, Steep-bank River, F. v. M.

R. glauco-viride, Hampe in Linnæa, 1876, 325.

Rockingham Bay, Dallachy. R. austro-montanum, Hampe in F. v. M. fragm. XI., suppl.

51 (Hypnum).
Locality unrecorded.

R. pseudo-murale, Hampe in Linnæa, 1859-60 (Hypnum). Gippsland, Moe Swamp, F. v. M.

R. Pseudo-Teesdalii, Hampe in Linnæa, 1859-60 (Rhyncho-Hypnum).

Gippsland, Broadrib River, F. v. M.

R. muriculatum, J. Hook. et Wils. Tasmania, J. Hooker, Gunn.

R. trachychaetum, F. v. Mueller, Australian Mosses, pl. XV., Victoria, F. v. M.

R. subpungens, Hampe et C. Mueller.

Locality unrecorded.

R. glaucescens, Hornschuch. Locality unrecorded.

Brachythecium, Schimper.

B. aristatum, J. Hook. et Wils. in Fl. Tasm. II., 210 (Hypnum)

Tasmania, Archer, Gunn.

B. Kayseri, Geheeb in Rev. Bryol., 1876, 4.

Near Sydney, Kayser.

B. Novæ Valesiæ, Geheeb in Rev. Bryol., 1876, 4.

Near Sydney, Kayser.

B. paradoxum, J. Hook. et Wils. in Fl. Antarct., t. 155 (Hypnum).

Gippsland, F. v. M.; Tasmania, Archer.

B. salebrosum, Mitten; B. campestre, Mitten in J. Hook., Fl. Tasm, II., 210, non Bruch.

Tasmania, Archer.

P. rutabulum, L. (Hypnum).

Tasmania, Archer, Gunn, Oldfield.

B. austro-alpinum, Hampe in Linnæa, 1859-60 (Sciuro-Hypnum).

Australian Alps, F. v. M.

Sciaromium, Mitten.

S. glauco-virens, Mitt. in Seem. Fl. Vit., 400. Norfolk Island.

Hypnodendron, C. Mueller.

(Mniodendron, Lindberg).

H. comosum, Labillardière (Hypnum).

Tasmania, Labillardière; Gippsland, F. v. M.

H. Sieberi, C. Muell., Syn. II., 504.

New South Wales, Sieber; Tasmania, J. Hooker, Gunn, Archer.

H. Colensoi, J. Hook. et Wils. in Fl. Tasm. II., t. 176. Tasmania, Gunn.

H. Archeri, Mitt. in J. Hook. Fl. Tasm. II., 206. Tasmania, Archer.

H. arcuatum, Hedwig; H. spininervium, Hook., Musci exot. 29.

Victoria, F. v. M.; Bellenden Ker Range, Karsten.

H. prænitens, Hampe in Linnæa, 1874, 671. Lord Howe's Island.

Thuidium, Schimper.

T. furfurosum, J. Hook. & Wils. in Fl. N. Zeal. 107 (Hypnum); H. unguiculatum, J. Hook. and Wils. in Fl. Tasm. II., t. 176; H. hastatum, C. Muell.; H. Stuartii, C. Muell. in Linnæa, 1856, 459; H. amblystegioides, C. Muell. in Rev. Bryol. 1876, 4.

Tasmania, Archer; Ash Island, Mrs. Forde; Victoria, F. v. M.

T. sparsum, J. Hook and Wils.

Bellenden Ker Range, Karsten; Logan River, Scortechini; perhaps var. of the preceding.

T. ramentosum, Mitten.

Toowoomba, Hartmann; Brisbane River, Bailey, Logan River, Scortechini; Parramatta, Woolls; Norfolk Island, Thompson; Bellenden Ker Range, Karsten.

T. læviusculum, Mitt. in J. Hook. Fl. Tasm. II., 207. Parramatta, Woolls. T. nano-delicatulum, Hampe in Linnæa, 1876, 324.

Illawarra, Johnson; sub-tropical East Australia, Eaves.

T. erectum, Hampe.

Locality unrecorded.

T. suberectum, Hampe in Linnæa, 1860, 638; F. v. M., Austr. Mosses, pl. XII.

Tarwin River, F. v. M.

T. rubens, Hampe & C. Muell. Locality unrecorded.

T. plumuliforme, Hampe, in Linnæa, 1876, 324.

Illawarra, Johnson.

XIX. SKITOPHYLLEÆ.

Fissidens, Bridel.

F. Muelleri, Hampe in Linnæa 1855, 214 (Conomitrium), et 1860, 644; F. Dillenii, Mitt. in Kew Journ. Bot. VIII., 262.

Murray River, F. v. M.

F. rigidulus, J. Hook. & Wils. in Fl. N. Zeal., t. 83.

Australian Alps, F. v. M., Tasmania, Archer, Gunn, Oldfield.

F. pungens, C. Muell. & Hampe in Linnæa, 1853, 502; F. v. Mosses Austr. M. pl. XVII.; incurvus var., Wilson, in J. Hook. Fl. Tasm. II., 167.

Barossa Range, F. v. M.

F. vittatus, J. Hook. & Wils. in Fl. Tasm. II., 167.

Swan River, Drummond; Tasmania, Gunn; Gipps-

land, F. v. M.

F. maceratus, Mitten; humilis, flaccidus; folia laxe inserta, ligulato-lanceolata, acuta, integerrima, nervo tenui supra medium laminæ apicalis evanescente prædita; lamina vera æqualis; cellulæ ovali-hexagonæ, pellucidæ; margo limbi angustissimus, fere obsoletus; theca in pedunculo elongato erecta, obovata.

Brisbane River, Bailey.

Caulis 2 mm. altus; folia 2 mm. longa; pedunculus 4 mm. altus.

F. incurvus, Schwægrichen, J. Hook. Fl. Tasm. II., 167. Tasmania, Gunn, Oldfield.

F. Taylori, C. Mueller; F. pygmæus, Tayl. in Lond. Journ. of Bot. 1846, 66.

Swan River, Drummond; Tasmania, Archer.

F. pacificus, Angstræm in Œfvers of Kongl. Vetens. Færh., 1872-3.

New South Wales, Prof. Anderson.

F. delicatulus, Angstr., Œfvers of Kongl. Vetens. Færh. 1872-3.

New South Wales, Prof. Anderson.

F. linearis, Brid., Syn. I., 71.

Australia.

F. semilimbatus, C. Muell. & Hampe in Linnæa 1853, 501. Yarra; Gippsland, F. v. M., Australian Mosses, pl. XVIII.

F. oblongifolius, J. Hook. & Wils. in Fl. N. Zeal., t. 83.

Tarwin, F. v. M.; Tasmania, Archer.

F. strictus, J. Hook. & Wils. in Fl. Tasm. II., 167. Tasmania, Oldfield.

F. integerrimus, Mitt. in J. Hook. Fl. Tasm. II., t. 171. Tasmania, Archer.

F. hyophilus, Mitten; monoicus; caulis decumbens, ramosus; folia linealia, obtuseacutata; lamina vera apice subæqualis, immarginata; nervus pellucidus, ante apicem evanidus; cellulæ minutæ, rotundæ, obscuriusculæ, marginales minutissime prominulæ; theca in pedunculo folii longitudinis parva, ovalis, subæqualis; operculum rostratum.

Ranges between the Burnett and Brisbane Rivers, F. v. M. Caulis 5-10 mm. longus; folia, 2 mm. longus; pedunculus 2 mm.; color luteo-viridis.

F. pallidus, J. Hook. & Wils. in Fl. N. Zeal., t. 83. Tasmania, Gunn.

F. tenellus, J. Hook. & Wils. in Fl. N. Zeal. II., t. 83.

Sealers' Cove, F. v. M.; Tasmania, Archer. F. perpusillus, C. Muell. & Hampe in Linnæa, 1855, 214 (Conomitrium).

Sealers' Cove, F. v. M., Australian Mosses, pl. XVI.

F. basilaris, C. Muell. & Hampe in Linnæa, 1853, 501. Barossa Range, F. v. M.

F. macrodus, Hampe in Linnæa, 1860, 645; F. v. M., Austr. Mosses, pl. XIX.

Yarra River, F. v. M.

F. elamellosus, C. Muell. & Hampe in Linnæa, 1855, 214; F. v. M., Austr. Mosses, pl. XX.

Yarra River, F. v. M.

F. Victorialis, Mitten; caulis gracilis, elongatus; folia integerrima, parva, oblongo-lanceolata, acuta; lamina vera apice inæqualis; nervus intus apicem evanidus, obscure fusco-flavus; cellulæ minutæ, rotundæ, limitibus latius culæ, pellucidæ.

Victoria River, F. v. M.

Caulis 1 centm. altus, cum foliis 1½ mm. latus.

One of the only three mosses seen by me in Northwest Australia in 1855 and 1856—F. v. M.

F. Dietrichiæ, C. Muell. in Linnæa, 1871, 146.

Brisbane River, Dietrich.

F. dealbatus, J. Hooker & Wilson. Tasmania, Archer.

F. Archeri, F. v. M.

F. adiantoides, Wilson in J. Hook. Fl. Tasm. II., 168 non Hedwig.

Tasmania, Gunn, Archer.

XX. POLYTRICHEÆ.

Buxbaumia, Haller.

B. Tasmanica, Mitt. in J. Hook. Fl. Tasm. II., 199. Tasmania, Archer.

Atrichum, Beauvois.

A. Muelleri, C. Muell. & Hampe in Linnæa, 1855, 211 (Catharinea); A. ligulatum, Mitt. in J. Hook. Fl. Tasm. II., 200.

Dandenong, Apollo Bay, Tarwin River and other places in Gippsland, F. v. M.; Parramatta, Woolls; Tasmania, Archer.

Psilopilum, Bridel.

P. crispulum, J. Hook. & Wils. in Fl. N. Zeal., t. 87. Tasmania, Archer.

P. Australe, J. Hook. & Wils. in Fl. N. Zeal., t. 87. Tasmania, J. Hooker, Archer.

P. pyriforme, Hampe in Linnæa XXXVII., 517 (Catharinea). Blue Mountains, Mrs. Calvert.

Polytrichadelphus, C. Mueller.

P. Magellanicus, Hedw., Sp. Musc., t. 20, f. 1. (Polytrichum, L.); P. innovans, C. Muell. in Bot. Zeit., 1851, 548.

Tasmania, Oldfield, Archer, Mossman.

P. Australasiæ, Hampe in Linnæa, 1876, 315.

Sub-tropical East Australia, Eaves; Richmond River, Capt. Stackhouse.

P. Arnoldi, Hampe.

Mount Arnold, Upper Yarra, and Goulbourne River, F. v. M.

Pogonatum, Bridel.

P. alpinum, L. (Polytrichum); P. austro-alpinum, F. v. M.; P. pseudo-alpinum, C. Muell. in Bot. Zeit., 1853, 750. Cobberas Mts., Australian Alps, F. v. M.; Tasmania, Archer.

P. Gulliveri, Hampe in Linnæa, 1876, 315. Mt. Wellington, Tasmania, Gulliver.

Polytrichum, Dillenius.

P. commune, Linne, sp. pl. 1109. Victoria, F. v. M.; Tasmania, Gunn, Archer. Var. perigoniale.

Cobberas Mts., F. v. M.

P. Novæ Hollandiæ, Jæger, I., 732; P. densifolium, Hampe in Linnæa, 1860, 635. Mount Wellington, F. v. M.

P. juniperinum, Hedwig, Spec. Musc., 89.

Victoria, up to the highest Alps, F. v. M.; near Melbourne, Adamson; Mt. Wellington, Tasmania, Mossman, Archer.

P. Sullivani, Hampe in Linnæa, 1876, 316.

Between Mt. Ararat and Mt. William, Sullivan.

Dawsonia, R. Brown.

D. superba, Greville in Ann. and Mag. of Nat. Hist., 1847, 226, pl. 12.

N. S. Wales; Dandenong, Upper Yarra, Sealers' Cove and many other places in Gippsland, F. v. M.; Tasmania, Archer.

D. polytrichoides, R. Brown.

Near Port Jackson, R. Brown; Parramatta, Woolls.; Brisbane River, Bailey; Ash Island, Mrs. Forde.

D. longiseta, Hampe in Linnæa, 1860, 634; F. v. M., Austr. Mosses, pl. IX.

Parramatta, Woolls; Brisbane River, Bailey.

D. appressa, Hampe in Linnæa, 1858, p. 635; F. v. M.; Australian Mosses, pl. X. Onkaparinga Valley, St. Vincent's Gulf, F. v. M.

XXI. SPHAGNEÆ.

Sphagnum, Dillenius:

S. confertum, Mitt. in J. Hook. Fl. Tasm. II., 163. Tasmania, Archer.

S. Australe, Mitt. in J. Hook. Fl. Tasm. II., 163.

Tasmania, Archer.

S. cymbophyllum, F. v. M., second gen. rep., 1854, p. 17; S. cymbifolioides, C. Muell. in Bot. Zeit., 1851, 546 (nomen vix servandum) et forsan S. contortum, Wilson in J. Hook. Fl. Tasm. II., 162.

Australian Alps, F. v. M.; Tasmania, Gunn, Archer.

Oldfield.

S. molliculum Mitt. in J. Hook. Fl. Tasm. II., 163.

Tasmania, Archer.

S. Novæ Zealandiæ, Mitt. in J. Hook. Fl. Tasm. II., 163. Tasmania, Archer.

S. cristatum, Hampe.

Australian Alps, F. v. M.

S. compactum, Bridel.

Tasmania, Oldfield.

S. subcontortum, Hampe in Linnæa, 1876, 301. Mount Warning, Guilfoyle.

S. cymbifolium, Dillenius.

Gippsland, F. v. M.; Brisbane River, Bailey; Tasmania, Gunn, Archer, Oldfield.

XXII. ANDREÆÆ.

Andreæa, Ehrhart.

A. subulata, Harvey in Hook. Icon. pl. rar. II., 201.; A. pseudo-subulata, C. Muell. in Bot. Zeit., 1864.

Tasmania, Archer.

A. Australis, F. v. M.; Mitten in Kew Journ. Bot. VIII., 257.

Munyang Mountains, Mt. Wellington and other
places high in the Australian Alps, F. v. M.

A. montana, Mitt. in J. Hook. Fl. Tasm. II., 161. Tasmania, Archer.

A. nitida, J. Hook. & Wils. in Fl. Antarct., t. 53. Tasmania, Archer.

A. asperula, Mitt. in Journ. Linn. Soc., 1859; A. Muelleri, Sonder.

Australian Alps, F. v. M. A. petrophila, Ehrhart Beitr. I., 192.

Tasmania, Archer, Gunn.

A. acuminata, Mitt. in Journ. Linn. Soc., 1859. Tasmania, Archer.